1.1.7

## DISCOVERIES

AND

## IMPROVEMENTS

In the most considerable Branches of

# Anatomy and Surgery.

Wherein Four of the most dangerous Operations are prevented, viz.

I. The great Use of the Curve-Catheter, in a Suppression of Urine, and easing the racking Pain of the Stone in the Bladder.

II. RUPTURES of all Kinds cured without Cutting.

III. The DIVEDED TENDON cured without Stitching.

IV. The WHITE-SWELLING cured without Difmembering.

V. The best Method for the Reduction of Fractures,

and Dislocations.

The face

VI. The Nature of Gun-shot, and other Wounds; and of the Errors committed in Bleeding.

VII. The True Seat of the Gonorrhæa demonstrated; and Cure of the Venereal Disease.

VIII. Of the Circulation of the Blood in the Fætus, and the Nourishment thereof.

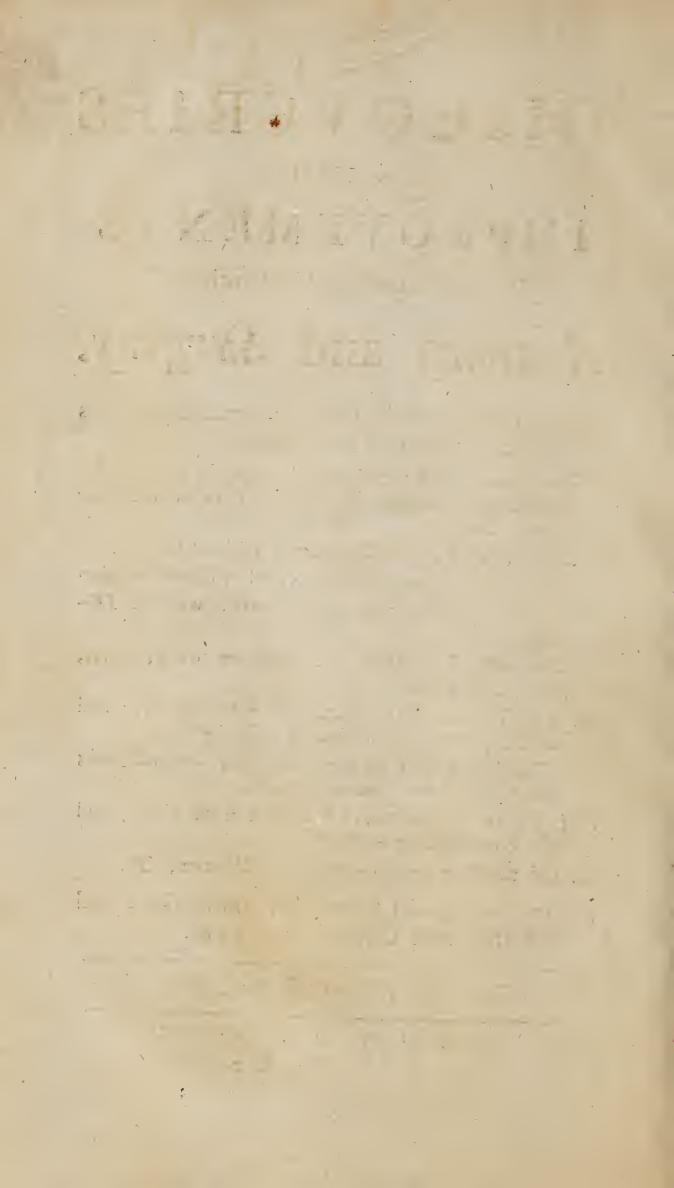
IX. Of the PARTS of Generation in Women, &c.

The whole proposed by way of Instruction; and Illustrated with CASES and CURES,

#### By Mr STUART, Surgeon.

#### 0 N D O N:

Printed for the AUTHOR. M.D.cc.xxxvIII





TO

# Ambrose Dickins, Esq;

Serjeant-Surgeon to his MAJESTY.

SIR,



HEN Interest does not Byass, Authors chuse for their Patrons Persons honour-

ed with Affluence of Applause in their Professions.

In your early Years you discovered an inquisitive Spirit,
A 2 and

iv. The DEDICATION.

and a pleasing Disparity in Un-

derstanding.

This was the Motive on which Mr Barnard, Serjeant Surgeon of perpetual Memory, adopted you in Marriage to his Daughter his only Child. By inheriting his Fortune, and high Station with general Approbation, you discover a Modesty, and Rectitude of Manners which can result only from Learning, and a superior Knowledge.

As Head of the Faculty, and a Debt to your Merit, I address this short Treatile to you.

You will perceive that it contains many Discoveries in Anatomy, and Surgery. Being wrote to a Pupil it wants an Explanation in some Circumstances: This I will make to you on the first Intimation which I shall take as a Command, rather a Sanction; this I never will violate.

Tho' your Approbation will be my Fame, and your Favour a great Purchase, I will subscribe implicitly to your Sen-

timent.

It is just that the Defects, and Blemishes should return upon me.

### vi The DEDICATION.

As to my Education you will read where I had it.

Undeserved Honour detracts from the Giver.

Therefore we receive Pleafurein paying our Acknowledgments to a Person transcending in Virtue.

Honour, Ambition, Fortune, Happiness, and Inclination, the strongest Motives in Nature will always prompt me to court a Correspondence with you, if it be not a Crime.

I am, SIR,

London, March 25, 1738.

Tour Most Obedient,

Humble Servant

Alexander Stuart.

#### THE

### CONTENTS

OF the Reduction of Fractures and Dislocations. Page 3. Of Gunshot, and other Wounds. Cases and Cures. p. 12. Of Ruptures, and their Cure. p.19. Of White-Swellings, &c. p. 23. Of the true Seat of a Gonorrhæa, and its Cure. Of the Circulation of the Blood in the Fœtus, and of its Nourishment. Of the Parts of Generation in Women, the Law of Formation, &c. P. 45. Of Errors in Bleeding. p. 52. Of the Stone, and its Cure. p. 53.

The Author's Business not permitting him to attend the Press, the Reader is desired to correct the following

ERRATA,

PAGE. 9. Line 14. read Nervosum. p. 10. l. 8. r. Despumate. ibid. 18. r. Heterogene. ibid. 20. Missentery. p. 11. l. 10. r. knew nothing, p. 18. l. 6. r. Hollidays not excepted.p. 19. l. 13. r. Tendonous, p. 20. l. 19. r. Misserere, ibid, 24. r. Bowel, p. 25. l. 6. r. apposite. p. 35. l. 8. r. Hernia Gutteris. p. 40. l. 16. Botal, an eminent Anatomist at Paris, who found out this Canal of Communication. p. 41. l. 1. r. an. p. 44. l. 10. r. Ragnoides.

LETTERS, directed to Tom's Coffee-House in Covent-Garden Post-free, will come safe to the Author of this Treatise.

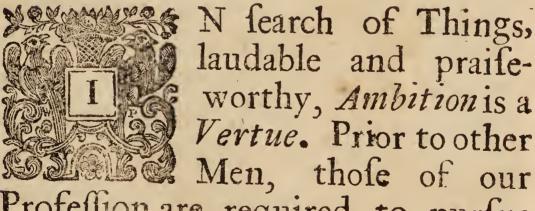


### INSTRUCTIONS

Anatomical and Chirurgical.

In a LETTER to a PUPIL.

SIR



Profession are required to pursue their Progressive Improvement in this Case; but we must climb the Hill; Vertue sits o' Top. Care is painful; the Charge of Men, and Women's Lives, and Limbs revolves

B

the.

the Surgeon's Breast. To retain his Tranquility he is to proceed in his Business, according to the received Maxims, and approved Method of the best Practitioners. Learning gives Tranquility of Mind; it points the Road to Reputation and Riches.

It is a Maxim among Infidels' to speak well of all Men as far as Vertue will permit; Slander is base, and does recriminate. It is far from me to derogate from the Masters of your Hospital, \* but who among such Folks imparts his Knowledge, and if they do, ought not young Men to proceed in their Research: Reputation lost, is hardly retrievable; we are not to risk this rashly: On the other Hand, the World is apt to form a great Idea of a Surgeon of an enterprizing Genius; they presume that his Knowledge

is well founded; so they may, being attended with Success. Temerity puts a Man off his Guard; this is subject to great Danger.

THE Reduction of Fractures, and Dislocations is a great and necessary Article in a Surgeon's Business; to decline this, is inconsistent with his Character, see himself postponed to a country Fellow, in all other ref-pects inferior to him. Granting that many of those People set Bones at random, you will not eafily be believed in saying so, even when they miscarry. There is Reason to retort, that good Surgeons fail in this Case, tho' Men are required to speak Truth, it would be a Hardship on Surgeons to tell all which they know, or believe; they would confess that sometimes the Swelling confounds them in distinguishing the Species of Frac-B 2 tures

tures, particularly Luxations. This Reflection ought to put young Surgeons under an indispensible Ob. ligation to distinguish the great Variety also of Sub-Luxations, and be familiarly conversant with the other Rules of Art, to arm against Contingencies. When you have been instructed in the Osteology, the Myology, and the Angiology, the History of the Bones, the Muscles, and the Blood-Vessels, you will cut without Danger, by the Dis- and Re-place of the Head of the Bone, see how and where the Muscles and Ligaments are banded, and relaxed; then from the intense Pain, the privation of Motion, and the Position, judge where the Distortion is made, notwith-standing the Swelling. This Rule will direct you in adjusting the Extension, and in moderating the Violence. 

WHEN

When the Femur, the Thigh, is dislocated backward; I mean when the Head of the Bone is under the Gluti, or Fleshchi, the three Extensor Muscles of the Femur, all Authors, as well as other Surgeons, agree, few contradict, that the Reduction is impractible, by Reason that the Head of the Bone cannot be removed; especially in that the Ligament, Tarsor, being broke, the Bone will not keep in it's Place: I will demonstrate how this Luxation may be reduced, and by what Means the Ligament restored.

Rules will be given respecting Fractures, particularly the Oblique, and Transverse-Fracture of the Femur, the Thigh bone, which cannot be felt, by Reason aforesaid.

EXCEL-

Excellent Directions Will be given to keep the Compound-Fracture free from Pain, and without the exfoliating the Bone, cure the Wound with Facility, and Promptitude. In departing from these Rules the menacing Accidents rising high, the Life of the Diseased is cast away, or hangs in doubt.

Y o u will be apprized of an Error in a reputed great Author: \* this for many Years has been a stumbling Block to his Practising-Successors, and sometimes fatal to the Subject, if he escaped with his Life, he underwent a long Weakness, and not seldom a Deformity in his Limb. I am acquainted with a Gentleman, a shameful Example of this Error in two great Surgeons in Concert, one of them a Grandee of the first Class;

Class; the Afflicted deplores the Remembrance of his Sorrow, and the Loss of the Use of his Elbow; these in a great Measure might have been prevented, with no danger of his Life, or Lameness, little Pain, loss of Time, or Expence comparative,

By the Indication of the Pulse, and of the Urine, you may betimes animate your Digestive, then by change of Dressing turn gradually the redundant Discharge to Incarn the Wound, and generate, and confirm the Callous: This Practice must needs be just, seeing that by certain Tokens in the Matter or Discharge, this is known to be the Chyle, and indeed the native Balm of the Blood which cures all Wounds. In this Case, Old People seldom recover their Strength; the Spirit and Balsam of the Blood is evaporated:

evaporated: This is become Cadave-rous.

If I do not take upon me to determine the controverted Hypotheses in Theory, it is not improbable but in this I shall make a pleasing Advance.

In this Sentiment you will find yourself in Condition to distinguish Books; was I to speak my Opinion of them, I must own that there are not many worth reading. It is not hard to comprize in a Sheet or two of Paper, what is material in some of the best of them, particularly those of the Practice of Surgery.

WITH a copious, and beautiful Variety of Topics, you shall have the Occasional Method of Internal Prescription, to digest Wounds,

Wounds of the Brain, and Wounds of the Viscera. Of all other, Gunshot Wounds in the Joints are formidable to Nature. Application of actuating, fortifying, and resolutive Medecines of various Kinds not generally known are to be made according to the Exigency of the Wound: the Surgeon is to steer his Course, as it were, between Charybdis and Scylla, a Rock, and a Sand, as they term it. Without adding Fewel to the burning Fever, he is to cherish the Genus Nervosam; from thence the interessing Soul sends continually Succours of Animal Spirits in Aid of Nature in the unequal War with her united cruel Enemies Pain, Fever, Thirst, Burning, Watching, Delirium. In Failure of these Spirits to rarify, and animate the condenfingBlood, to digest theWound, alleviate the Pain, and support or ftrengthen

Itrengthen the Heart, labouring under the redoubling Pulse, the mortal Symptoms prevailing; the noble Organs ceasing to perform their Vital and Animal Functions, the Soul deprived of her Power, is forced to depart.

You should learn to despamate, secern, and transfer the dangerous Rellux of purulent Matter oppressing the Blood, and Animal Spirits with Restlessness, Fever, Delivium, the Hickok, Lethargy, Apoplexy, Convulsions, &c. the Harbinger of Death.

UPON a fudden Suppression of Sweat sometimes this becomes a Hetorene Humour, and with pungent Pain vellicats the Intestines, the Missentory, the Pleura, the Mediastinum, the Pericranium, and other Parts greatly subject to Resentment.

Resentment. Of all Cases this embarasses the Surgeon; Secretion being the Work of Nature he cannot appoint the Time, nor till this is accomplished hardly obtain a Respite, or Cessation of the Violence: This seems to have been the late Case of a great King, which for what we could perceive his Physicians and Surgeons knew, yet like a Starrost with his Hand on his Sabre in Senate, they were for defending their Argument in the Antichamber.

Laudanum is our great Anodyne, this we are forbid; it restrains the Transsussion of the Animal Spirits on which depends the Function and Formality of the Parts, also the Energy of the secerning Blood. A continued Use of this Medicine may render the Disease incurable, or of a long Duration. Purging and Bleeding interrupt Nature: She has chose to deliver herself by

Glands, and will not be controuled. Perspirating, Alexipharmic, and Volatile Medicines are of a little Effect till towards the Crisis; Nature alone maintains the Conslict; Hence it happens that sometimes she does not overcome till from a Vernal Solstice chiefly, the Blood has received an Accession of Warmth to ferment, and discharge in the Surface.

Some Years ago I tended a Gentleman who upon drinking cold Water when hot, and Sweating was feized with a violent Pain in the nervous Tunicle of his Bowels. After a tedious Indisposition a large Abscess was formed in his Groin. Tho' I opened the Swelling as soon as it fluctuated: The Blood and Spirits were so tainted, and charged with this foreign Humour, that

that he had an accelerated, a low, and an irregular Pulse; was delirious, had cold clam Sweatings, an Hickok, a Diarrhea and a Gangarene round the Border of the Wound; also an advanced Mortification on the Inside of That Knee. In five or fix Days the Wound discharged so many Quarts of a lixive, ganger Lymph: When the Mortification was stopt and a Separation made one might turn his Hand in the Wound quite to the Peritoneum in fight. Now the mortal Symptoms began to remit: In less than five Weeks the Wound was sicatrized. You will agree that the Cure depended on proper Internals; had there been a Defect in the Dressings he must have perished, so he would had I fatigued him with Pain.

BETWEEN two and three Years ago, one Mrs Gyles, had for

Year before, a continual Diarrhea, or Lienterria; the Chyle, or Nourishment, ran off, the greatest Part of it before it entered the Lacteals. In the Spring of the Year a large, cold, white, fluctuating Swelling grew on her right Hypondria below the Ribs. From the beginning she had an aching Pain shooting deep into the Liver; the Seat or Source of her Indisposition; a suppressed Sweat transferred. A considerable Surgeon in Town told her to be well advised in whom she trusted, and that he did not open the Swelling too foon. In about a Week I stopt the Loosness: In eight, or nine Days more the Swelling became warm, and reddish, but frightfully increased in Bigness: I told her now was the Time; she yielding, I opened the Swelling with a Lancet; there was a Bason of a Quart and half a Pint of formed

formed Matter catcht; here and there streaked with Blood, toward the End. She, and others who faw the shifted Cloths and Bedding did believe that in 48 Hours the Wound did run a Gallon, and in four Nights two Quarts more; in all Six Quarts. The Return of the Diarrhea was what I apprehended most: This happened the first Night attended with cold, clam Sweating, a trembling Pulse, and Fainting; so again the second Night; and were as often taken off. In few Days more she mended daily, and in three Weeks was quite well: Then she grew Fat, Healthful, and Strong. She is lately married to James Taylor, a White-smith in Hatfield-street.

In five Weeks I cured a Gentlewoman of a large Mortification in her Loins extending on the Os Sacrum, Sacrum, and the Coxis, to affect the Sphinctures of the Anus, and the Bladder, cut off the Course of the Spirits, that she rendered her Excrements involuntary. In the beginning she had a Fever of the Spirits, a Delirium, cold Sweatings, and a Syncopa.

THESE Cures well understood, and the Medicines given will, with Variations, be a Precedent in many Grand Cases; nor are the Internal Things mentioned in any Book on such Occasions; yet which no Phycisian, or Surgeon, speaking without Prejudice, can disavow: They will, and must needs own that if any one ever was, these People, all of them by Medicine, were brought back from the Gates of the Grave.

WHAT deserves Remark; there was no Ruburb, or Astringent, no Opiate

Opiate, or Theriaca given in the Diarrhea, the Cortex suspends, or restrains Secretion; so does Laudanum: This shuts the Avenues of the Nerves, binding, or centering the Animal Spirits, it leavens the Blood, and opposes Digestion and Re-union. I shall occasionally speak farther of these Medicines, and how they may be given safely; here they would have been mortal by Reason of the Nervous Fever.

In case of a Collection in the Mediastinum, De Verney says we may trepan the Sternum. He was Professor of Anatomy in the Royal Garden at Paris, and probably the greatest that ever lived, taken throughout. He Illustrated his Demonstrations of all Parts of the Body with his comparative Anatomy of Horses, Calves, Dogs, Cats, Fowl, Fish, Frogs, Eggs; including his public

public Lectures, and Course of Operations. His Course of Anatomy lasted from the Beginning of September till the end of March, all the Week (Sundays, and Holidays excepted) from Morning till Night, an Hour at Noon allowed. He was Forty Years Royal-Professor; had read all valuable Books; was thought to be one of the greatest Orators in France. Being of easy Access his Scholars had a fair Opportunity of Improvement. His Papers would have made a Volume little less than a Church-Bible; but they never were published. Few can judge of the Loss, yet this may easily be perceived in the Defects, and Impertinencies in Mens Discourse and Writings on this Sub. ject, some who hold their Heads high.

You shall see the several Intentions practifed to restrain the Affluence of Suppuration, which procrastinates, and defeats the Cure of Wounds, and renders Ulcers sinous, callous, and fistulous, then by exalting, and displaying, rebating, and correcting the Blood, render this subservant to your Purpose.

Y o u will be entertained with an Essay on the Hernia of the Parts, will learn to disengage the Intestine Ilion strangled in the tendous Perforation of the great Oblique, the external Muscle of the Abdomen; and how to prevent the Return of the Ilion into the Inguin, or Groin. Such is the Force of a few external Medicines, that they essect the Cure of the Rupture in People advanced in Years, if I do not say without help of a Truss, this I have done, upon considering D 2 them

them well, and how they are adapted to several Purposes co-operating, you will perceive that they bear the greatest Congruity to Reason, and Probability of Success; should they fail, or fall short in what is promised, others are appointed to sustain the Effort, strike off the Symptoms as they arrive. In fine, you shall have a System of Prescriptions to traverse the Train of Appearances, and anticipate the dangerous Operation of the Bubonocele or strangled Rupture even when the vermicular, the peristaltic, or natural Motion of the Intestines is inverted, and they vomit their Excrements as in the Micere, or Iliac Passion.

As K at Mr Baker a Cooper in Nottingham-street: I cured his Wife of a strangling of the Bowels attended

attended with violent Pain and Sickness, when without Passage downwards, she for Eight Days vomited every thing that she took.

When I non this Occasion, and probably in this Manner, you have had the good Fortune to redeem, or ransom Men from Death; you should fence them with Strength, brace the unbended Muscles, and the expanded Tendons, restore the Resort of the relaxed Ring, to withstand the Protrusion of the Intestine, and of the Epiploon into the Ain, or Inguin, and the Scrotum, the Seat of the Bubonocele, and of the Complete Hernia.

I have a Sheet of Paper wrote throughout on the Cause and Cure of the Rupture.

FROM

FROM the long and oftentimes repeated Experience which I have had of my Method of Cure of the Rupture, I will, and do engage to take only Twenty Shillings for Things, nor will I ask more if I do not cure the Diseased absolutely, if through Neglect, or otherwise they do not profane the Use of my Medicines. I will, put them to no Pain, Trouble, or Inconveniency farther than to wear a Cotton-Truss 10 or 12 Days till my Medicines do take Place.

Y o u will take Notice that this Promise is to be understood with some Exceptions, or Restrictions, respecting great Age and Weakness.

M R Mitchell, Colourman overagainst Haberdashers Hospital in Hoxton; had his eldest Son born with with a Complete Rupture. I cured him at Ten Years old.

A Scholar at the Latin Boarding School at Edmonton was lately cured by me of a complete Rupture on both Sides the Intestine, or Bowel, quite down in the Scrotum. Send to Mr Harrow Master of the Boarding School.

You shall learn to supercede successfully the Stitch, or Suture of the Tendon, cure the Wound, and recover the Use of the Part sooner, and with far less Pain, than by the Operation.

THE Cure of the painful Ancbylose, or White Swelling in the Joint, is a Consideration of no little Import, and known but to a few. You shall see how to give a present Judgment of this, and cure all curable Kinds; this will go far. I have wrought Miracles of this fort, so may you with help of my Thesis on this Subject.

I have an Essay on the Circulation of the Blood in the Foetus, and on the Nourishment of the Foetus.

What is alluring to the Ear: You shall hear a Discourse on the Parts of Generation in Women, and on the Law of Formation, the Pre-existence of Lineaments in the Ovum.

I will annex an Essay on the Passions and Affections, accounting for them from the near, and familiar Consent of the Various Plexus of Nerves, and the intimate Correspondence of the Animal Spirits reciprocating in them.

You shall be convinced of the Certainty of extracting the Stone in the *Urethra*, without Danger of having the Wound remain Fistulous.

To many opposite Digressions on the other great and necessary Heads of Anatomy and Surgery; I will give a Process on the Bronchocele, the glairous Swelling of the Glands Thyroides; threatning a Suffocation from the Pressure of the Swelling on the flexible Part of the Annular Cartilages of the Aspera Arteria.

A B o U T a Year ago, I opened an Ulcer in the Roof of Captain Hughes's Mouth: I exfoliated, and took out the Bone of the Pallat. Inquire at Mrs Starky's in Dean-street, by Red-Lyon Square. The Captain will show the Bone, and that

that the Wound stands sound, nor can you perceive any Alteration in his Speech.

The Ree Years ago I opened and cured a Scrofolous, or King's Evil Swelling in a Gentlewoman's Neck. Inquire at Mr Kitchen's Bakerin Buckle-street, by Red Lyon-street, Goodman Fields.

An eminent Surgeon in Town will witness, that when with Three Bolusses of fourteen Grains of my Panacea I fluxed a Man Thirty Days; I opened the ulcerated Skin of his Nose. I cauterized the carious Bones several Times: I took out the Bridge, the Osfa Nasalia, both of them, and without sinking the spungy Bone underneath to make a Blemish; I cured him also of an Ulcer in his Throat large emough to receive a small Apple;

an Exostosis on his Wrist, and one on the second Joint of his great Toe; of all which he held well several Years, till he died of another Distemper. \* Other Surgeons give 150 Grains of Mercurius Dulcis, or more; consequently my Method of cure of the Venerel Disease is much safer, nor is it less effectual, than a Flux raised by Unction, whereas their Method of Salivation comes far short in Certainty.

I saw a great Surgeon in Town give fourteen Grains of Mercurius Dulcis, and seven Grains of Turbith Mineral, or yellow Mercury, for oneDosein a Gonorrhaa, a running of theReins as they call it. He told me that theBrotherhood speak as they please, but this is what they give, and even in greater E 2 quantity

<sup>\*</sup> I recovered a Woman brought to Bed in the Height of her Flux under all the dengerous Circumstances of a great Estusion.

quantity, whereas I do not exceed ten Grains of my Panacea, and that castrated of its vitriolic corrosive Points, in which is the Danger: It is by this Means that so small a Quantity of my Panacea raises a Salivation. It is true that I mix another Powder; but you shall be satisfied that this has no Relation to Mercury of any kind; nor is it Subject to ill Consequence.

Turblish The Mineral causes worse Effects: Of this I give none; It weakens, and relaxes the Medul Spinalis, or Back Bone Marrow, the Root of the Nerves of the inferior Parts that they cannot receive the Animal Spirits, nor indeed the Impression of the Imagination to push them. Thus defrauded of Spirits, the Stamen of Sense, and Motion, the Muscles of the Loins lose their Action and Strength, more or less.

OLD

O L D Gleets proceed from what the French call a Debility, or Laxness of the Vessels, the Emunctory of the Prostates. Purging makes the Case worse: Astringents are dangerous. I stop Gleetings of a long standing by tempering the Heat and Ferment of the Humour, by a Medicine absolutely safe, and pleasant to take.

You will expect that I should give my Opinion of the Seat, or Source of the Gonorrhaa. We are commanded to strive for Truth; this obliges me to speak affirmatively in Contradiction to a Book on the Hypothesis of the Lacuna, and the Patrons of this Theory. \*

Monsieur De Verney, the Gentleman already mentioned, shewed an Ulcer in the Prostates, of a Man who had this Distemper when he died. died. I heard him also say, that from thence came the Matter or Discharge in this Case.

THE Prostates lie on the depending part of the Bladder near the Sphinster, and the Erector Muscles of the Penis. The Instamation, and Swelling of the Ulcer, is soon communicated to those Parts through the porous Tunicles of the Bladder, from this it is easy to account for the Heat, the Stoppage, and Strangury of the Urine, also for the Pain and Cordee in the Time of Erection.

WHAT I am going to say will cast the Ballance, and determine the Controversy on my Side, absolutely.

I T is manifest that a Discharge of Matter must come from a Wound.

Consistent

Consistent with this Demonstrative Proposition it is found that the Excoriation, or Ulcer of the Proftates-Glands is always antecedent to the Gonorrhaa, whereas that of the Lucana does not happen of some time after, sooner, or later, according to the Heat, and Sharpness of the Urine, and of the Run-ning from the Prostates, so the Excoriation or Ulcer of the Lacuna can be only an Effect, or Consequence of thoseSymptoms: I mean that the Heat, and Sharpness of the Urine, and of the vitiated Discharge of the Ulcerin the Prostates passing often through the Urethra does chafe, and fret the thin and tender Membrane of the Lacuna, so occasions an Ulcer, or Excoriation in this Part.

In a long and great Discharge the Prostates are found to waste, and

and in the End to shrink, and shrivel to almost nothing, while the Excoriation of the Lacuna remains without Alteration. These Reasons rise to a Demonstration of my Assertion. The Experiment may soon be made in the Hospitals.

THE Succus or Juice of the Prostates, is the Vehicle which conveys the Volatile Semen into the Uterus. When this is spent, and the Prostates withered, Men become incapable of Procreation, but fertile Nature recovers some, as by a Miracle.

As in the Prostates, a long, and great Discharge of Matter or Nutritious Juice from the Lacuna would run sinous the cavernous Body of the Penis, and give as little Trouble to cure it.

WE

W E should find it impractible to restore the Masculine Proportion of the Penis.

But these Accidents do not happen; therefore the Seat of the Gonorrhaa, is not in the Lacuna.

I was bred in St Thomas's Hofpital, under Mr William Coatesworth: After this I was two Years under the celebrated De Verney at Paris, and in the Hospitals there.

A great Man in Town was my Pupil: Now he is a Physician, he does not scruple to own that he formed himself chiefly on the Anatomy, &c. which I taught him. His Father was a Surgeon of good Account; he chose me to educate his Son preferable to any Man in Town; so he used to say. I have bred several other Surgeons: Some

of them are much sought to in setting Bones.

DR fames Keill was a Gentleman no less valued for his Integrity than his Knowledge in Anatomy; I have inserted a Certificate from him.

TAKE down in Writing three or four remarkable cases in Cure in your Hospital according to the Number and order of your Queries, I will Account for the Appearances from the Fabric, the Function, and Situation of the Parts.

HAVE you a mind to hear fomething previous: Inquire out a Professor of Anatomy. I will meet him at his appointed Time, and Place, to answer and question him on this Subject. If he thinks sit the controverted Points shall be submitted

submitted to the Wardens of SurgeonsHall, or to two other Professors, or Physicians, and a third to adjudge.

SIR,

THE Swelling in your Lady's Throat is what Surgeons call the Bronchocele, or Hernia Gutterii; but to speak in particular; I say it is a Distention of the Glands Thyroides. They are two in Number situated on the opposite Sides of the Larynx, and the superior Part of the Aspira Arteria finking to the flexible Part of the Anular Cartilages. The use of these Glands is to strain from the Blood, a vicous glairous Liquor, to lubrify the Cartilages of the Larynx to facilitate their Motion. They as well as other Glands are greatly subject to cold Defluxions. They are the principal Fountains, F 2 and

Thus we may believe that this cold Humour is also sent thither from the salivary Sources, and other Glands adjacent. It is easy to think that as the Thyroides Glands swell, and take up a greater space, they press the flexible part of the Anular Cartilages aforesaid, obliging them to yield; they straiten the Trachia Arteria: This occasions the great Difficulty of Breathing, and threatning of Suffocation.

On this principle we render Reason for the loss of her Voice: The Recrurent Nerves suffers a Compression: Animal Spirits are wanting in the Muscles to play the Cartilages of the Larynx to form the Voice. She is worse when with Child, on Account that the Blood and Humours are more determined

to the superior Parts, especially in that as the Abdomen grows big it presses the Diaphragma against the Lungs, so lessens the Capacity of the Thorax, and hinders Respiration. Parallel to this is the Case of Dropsical People alway oppress with shortness of Breath: I mean in the true Ascites when the lower Belly is filled with Water.

The great Swelling gives Reafon to believe that the whole Substance of these Glands is sapped, and distended with this cold Humour like a spunge in Water; the sojourn of which has rendered their Texture so extremely lax, that they will not recover their Resort; consequently not admit of cure. Hence it is hard to promise more than to prevent an Extremity; for which if Purging, Bleeding, espessially Sweating, fortifying, discussing

cussing, drying, and corrugating Spirits, with the Emplastrum, Divinum, Diasulpharis de Ranis, and Saponis spread and embrocated frequently withOs Succini redificati should not prove effectual one may venture to apply a Caustic on each Side the Aspira Arteria, thereby procuring a plentiful Suppuration, the Humourmay bedrain-ed, and the Swelling lunk, but remembring that Digestion depends on the sweet Influence of the warm Blood, and Spirits in the Parts, of which in some Sort, this Swelling being deprived, it may be feared that the Wound will languish and ulcerate.

On the Circulation of the Blood in the Fœtus, and on the Nourishment of the Fœtus.

Aving the exploded Opi-nion of the Antients concerning the Manner of Nourishment of the Fætus; \* without Doubt this depends principally on the Blood, or rather on the assimulating Chyle.

THE Epigastric Artery of the Mother transfuses incessantly into the Placenta, S the Secundine, or Afterbirth a determined Quantity of Blood. This is received by the Vena Umbilicalis, the Navel String, | and carried in the Porta

<sup>\*</sup> The Fætus is nourished by the Blood.

§ The Blood brought into the Placenta.

The Navel-String receives the Blood from the Mou ther.

Porta through the Liver, thence in the Conduit Vena, to the Vena Cava, which empties in the Right Ventricle of the Heart of the Fætus. S This Machine put into Contraction sends what Blood can pass through the Foramen Ovale. and the remainder into the Arteria Pulmonaris: But Nature to favour the feeble Pulse of the Heart as wanting the Succour of Respiration shortens also the Course of this remaining Blood. She pushes it through the famous Canal of Communication, called also the Canal Botel, which joins the Artery and Vein of the Lungs. There is no more Blood sent into the Substance of the Lungs, than is necessary for their Nourishment.

Without making the Circuit of the Lungs this second Portion of Blood

<sup>§</sup> The Blood circulated in the Fætus

Blood, is also sent into the left Ventricle of the Heart. This Engine armed with strong musculous Fibres throws the Blood through the Aorta, and it's Productions to all Parts of the Body.

As the Blood returns to the Placenta in the Umbilical-Artery, it is absorbed by the Epigastric Vein and brought back to the Heart of the Mother. In this Manner, the reciprocating Circulation is conti nually carried. It is by Means of the forementioned Canal of Communication, that some Divers, having it still open, can abide so long under Water. Such People cannot easily be hanged, the Blood, which upon straitening the Aspera Arteria, to hinder Respiration, would re-gorge and extravase in the Lungs retires to the Heart by this abandoned Passage, to keep up a

a regular Sistole and Diastole, in alternate Contraction and Relaxation of the Ventricles of the Heart, by which the Blood, measured by the Auricles, is received and cast abroad to all Parts of the Body. On this depends the natural Life: In losing the Animal Spirits, and warmth of our Blood, we lose our Lives gradually.

Death is an Univeasal Repose, or

Cessation of Motion.

The second way of Nourishment of the Fætus.

WE are not to omit that the Infide of the Uterus, to which the Placenta adheres, is cloathed with abundance of Glands. They continually strain from the Blood a lacteous Liquor; this mixing again with

with the Blood in the Secundine is fucked up, or pushed into the Umbilical-Vein, so goes to the Fætus.

## The third Source of Nourishment of the Fætus.

The third Source of Nourishment of the Foetus is remarkable, it is the great Quantity of Nutritious Juice in which the Foetus floats in the Chorion and Amnios, the Tunicles, or Membranes, our cloathing in the Womb. This Juice has a milky chylous Tafte; it passes or is drawn through the Nostrils down into the Stomach, and lessens in quantity as the Foetus grows in Bigness, so that at the Birth there is little or none left. As to the Objection that such a Liquor has been found in the Stomach of Monsters who had no Note or Mouth; perhaps this might be only the Salivo, or something less. confiderable

considerable to sheath the Menstrum of the Stomach, and the supposed Meconio, the Mucus of the
Rectum, where it is well known
that the Faces receive their Smell,
their Colour, and Consistence; but
I submit the Solution of these preternatural Cases to the Judgment
of the College.

THE Raynoides, or third Membrane, is not found in the Human Foetus, for this does not urine\*. The Glandula Renalis performs the Office of the Kidneys. As this has no Excretory, or Third Canal, doubtless the Serum, or Urine is brought back with the Blood in the Emulgent Vein.

<sup>\*</sup> We do not Urine in the Womb.

An Essay on the Parts of Generation in Women, and on the Law of Formation, the Pre-existence of the Lineaments in the Ovum.

ments in the Ovum, is the only Hypothesis on this Subject reducible to the mechanical, or geometrical Principle, in which alone is Certainty. Tho'this is new, yet being highly curious and instructive, the greatest Physicians and Anatomists receive it readily. I shall with a parallel Example describe it in Terms so easy, and familiar, chast or seemly, that, without Offence, this with a little Attention, or Instruction may in general

general be understood by the fair Sex: They will see with Pleasure that this concerns them in a high Degree, Child-bearing Women particularly.

Those of our Profession who know most; scruple not to conclude and report, that all the Generations of Men were lodged in the Loins of Eve: The Name signifies Mother, and is meant the common Mother.

God made of One Blood all Nations of Men.

THEY compare the Ovarium of a Woman to a Bunch of Grapes, Twelve, Sixteen, Twenty or More in Number. In each of these Ova, or Eggs, the Lines or Lineaments of a Male, or Female, all of them, according to the great Fiat, are already

ready there. In their Turn as they become the nearest to what they call the Trump, the Head, or Extremity of the Tuba Falopiani, an Apendage of the Uterus, the Matrix, or Womb, the Eggs become receptive of the Impression of the Semen of the Male in the amorous Congress.

In the Height of the Carefs, the transporting, the rapturous Influence of the Spirits, and of the ardent Semen, darting through the Tuba, dresses or distends the Trump. Now like a Hand this does embrace the Ovum, so that the volatile, the essential, or spiritous Part of the Semen penetrates, warms, fecunds, enlivens, and determines the Egg to receive progressive Nourishment from the circulating

culating Blood of the destinated Mother.

with it's proper Membranes; the Chorion, and the Amnios, our Vesture in the Womb, and with the Placenta, or Secundine, all of them of the first Formation growing too big to hang upon the Ovarium, wanting also sufficient Nourishment does loosen, and separate. Now the impregnated Ovum is received by the Trump, and brought down through the Pipe, the second, or counter use of this Tube.\*

THE inner Orifice being shut, the Placenta cleaves to the Uterus, and becomes a new and greater Source of Nourishment from the Blood of the Epigastric Artery of the Mother.

<sup>\*</sup> Excepting one this is the most admirable piece of Mechanism in Anatomy.

Mosson Heir i 2023 is L Gold Blen-bilical Vein, the Navel String, and goes to the Conception. Thus by the recurrent Vessels the Blood does alternate to the Mother.

Now the Lines, or Lineaments of the Conception begin to unfold, and range by the increasing Blood

pushing.

I N This manner the Conception becomes an Embryo, and this a Fætus which by Degrees growing toMaturity, and straitened for want of Room, the Placenta also separating, falling away like ripe Fruit, or Leaves from a Tree, the Infant seeks to dislodge: Bearing on the Neck of the Womb, the Weight raises the Throws of Labour.

To prove what they here advance, Anatomists husk or skin the Seed of a Pine-Tree Apple, then holding it before the Sun they show the Top, the Trunk, and the

Root

Root of the Tree which it was to produce.

This they take as a Demonstration of their Hypothesis of the Pre-existence of Lineaments in the Ovum, on the Plea, that the Law of Formation is general.

Whiston believes that Generation is nothing but Nutrition, or Augmentation of the Parts; so it is, the Ovum being impregnated as aforesaid becomes susceptible of Nutrition, and Growth.

THIS Subject will be improved in Relation to the double Conception, and the parted Ovarium.

In the two foregoing Essays. Women will see with singular Satisfaction

faction the Time, and Manner of their Conception, and all the Alterations, and Accidents which do or may happen to them till their Delivery. Seeing that by Means of the Placenta the Child does only stick, or cling to the Womb, this may separate, or part by a Fall or other Violence. Perceiving the Danger, Ladies will naturally form to themselves a Regimen, or Manner of Living to prevent Abortion, or Miscarriage.

THEY will no longer believe the imposed Absurdity of bringing a Son, or a Daughter, attheir Wish, or Desire.

THESE things will be easily understood and give no little Pleafure in reading them.

Of

## Of BLEEDING.

have made on many Peoples Arms, and the great Accidents which happen often, it is evident that the Danger in Bleeding is little understood, few know how to shun it. You shall learn to Bleed easy, and be made absolutely safe in all Cases.

Was the Use of the Curve-Catheter generally known, and practised it would in a great Measure set aside the cruel Operation of Cutting for the Stone. Having Recourse to this Instrument, sew would expose to so doubtful an Event. THE Reverend Mr John Richardson, Preceptor to Baptist Noel Earl of Gainsborough, was for many Years almost incessantly tormented with a Suppression of Urine, and Strangury from a Stone in the Bladder. Sometimes he has staggered about the Room with convulsive Pain.

The first time that I introducted my Curve-Catheter he urined through this Instrument, and the Pain did remit. Next Day I turned a second Time the ragged Stone on the Smooth Part, and his Pain and Provocation went off. Excepting some short Fits of Pain, and Strangury he urined regularly for three Months. In using my Catheter in this Manner three or four Times a Year, he enjoyed a Life of Tranquility for Six Years till

he died, 1706. He was Fellow of Emanuel College in Cambridge, and his Vindication of the Canon of the New Testament, will perpetuate his Venerable Character in the learned World.

How many are tormented with a Suppression of Urine, and Strangury from drinking Stale Beer, or prickt Wine, sometimes an Obstruction happens from an Excrescence in the Neck of the Bladder, or in the Urethra. In all which Cases the afflicted may expect Relief from my Catheter.

I glide this Instrument under the Pubis into the Bladder, with either Hand from above-below, or below-above, without Pain, or Blood even in fencing with the Stone, if the Passage be not already excoriated. With this Instrument ( 55)

ment we push the Stone twice with the Curve, the Conoex and the Concave Part having as it were a greater hold, this gives a better Chance to turn the Stone than when they strike with the Point of the Strait-Catheter. Now the Stone returns on the ragged Side to keep up the Pain, and Provocation.

## Dr Keill's Certificate.

Northampton, Dec. 18, 1708:

Believe Mr Stuart to be a very good Surgeon, and well qualified to perform any Operation in Surgery.

James Keill.

FINIS.